

## SL123R UNITHERM

India's First and Only True Synthetic · High Load · High Temperature Grease to Prevent Failures in Gear Couplings and Heavy-Duty Drives

### Gear Coupling & Heavy Drive Applications in Refineries and Offshore

Refineries and offshore rigs run API 671 critical couplings on every major rotating machine — FCC main air blower couplings, compressor train couplings, pump train couplings, boiler feed pump couplings, and drawworks / top drive couplings offshore. API 671 explicitly calls for high-performance grease that resists centrifugal separation and sustains 120–160°C cavity temperature. Failure is catastrophic, insured, and regulated. SL123R UNITHERM meets API-aligned coupling grease specifications.

### Part A — Annual Cost of Gear Coupling & Drive Failures — 15 MMTPA Refinery / Offshore Rig

- **Coupling life:** ordinary EP grease delivers 1.5–2.5 years on API 671 couplings against 5+ year design life; centrifugal separation is the primary failure mode.
- **Coupling + overhaul spares: ₹60 lakh–1.4 cr/year.** FCC, compressor train, and BFP couplings are high-value API spares; overhaul includes rotor balancing.
- **Maintenance + NDT: ₹20–35 lakh/year.** API-spec coupling changes require documented NDT and torque verification.
- **Unit downtime / NPT: ₹4–10 cr/year — the dominant cost.** FCC main air blower coupling failure trips the unit; drawworks coupling failure on offshore stops drilling.
- **Total: ₹5–12 cr/year.** A true synthetic high-load, high-temperature grease with API-aligned spec delivers 3–4× coupling life and addresses ₹1.8–5 cr/year.

### Part B — Gear Coupling & Heavy Drive Applications

- **FCC Unit** — FCC regenerator main air blower coupling; flue gas expander coupling; slide valve actuator drives.
- **Furnace & Heater** — furnace FD and ID fan drive couplings; forced draft blower couplings.
- **Compressor Train** — main compressor drive coupling; booster compressor couplings; recycle gas compressor couplings.
- **Pump Train** — boiler feed pump drive couplings; main transfer pump couplings; high-pressure hydrocracker feed pump couplings.
- **Hydrocracker / Reformer** — recycle gas blower couplings; regeneration blower couplings; furnace draft fan couplings.
- **Sulphur Recovery (SRU)** — SRU tail gas blower couplings; incinerator fan couplings; Claus reactor blower couplings.
- **Utilities & Boiler** — BFP drive couplings; cogen turbine couplings; HRSG auxiliary drives.
- **Offshore — Drilling** — drawworks drive coupling; rotary table drive coupling; top drive gear coupling; mud pump drive couplings.
- **Offshore — Cranes & Rotation** — offshore crane slewing drive; platform crane rotation couplings; drilling rig rotary drive.
- **Tank Farm / Jetty** — loading arm rotation joint drives; mooring winch drive couplings; metering skid pump couplings.

**Request a free 90-day plant trial — your reliability data will speak for itself.**

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